

AMENDMENTS TO THE CLAIMS

1. (Previously Amended) A laser that controls amplified spontaneous emission and/or parasitic light, comprising:

a laser gain medium having polished surfaces that are used to transport pump light by internal reflection throughout said laser gain medium,

a light source directing laser pump light into said laser gain medium,

a layered coating on at least some of said polished surfaces that are used to transport pump light by internal reflection of said laser gain medium,

said layered coating having a reflective inner material and an absorptive or scattering outside material and

configured to substantially reflect the pump light that strikes the coating so as to direct the pump light back into said laser gain medium, and

substantially transmit said amplified spontaneous emission and/or parasitic light that strikes the coating so as to let this light strike said outside material of said layered coating where it is either scattered or absorbed.

2. (Original) The laser of claim 1, wherein said absorptive or scattering outside material is a diffuse reflectance material such as powdered BaSO₄, an absorbing film such as Ge, or a roughened surface to reduce the specular reflectivity.

3. (Original) The laser of claim 1, wherein said absorptive or scattering outside material is powdered BaSO₄.

4. (Original) The laser of claim 1, wherein said absorptive or scattering outside material is powdered an absorbing film such as Ge.

5. (Original) The laser of claim 1, wherein said absorptive or scattering outside material is a roughened surface.

6. (Previously Amended) An end pumped laser, comprising:

a laser light source,

a laser gain element, said laser gain element having enter or exit surfaces through which the laser light is intended to enter or exit the gain element and smooth surfaces other than those enter or exit surfaces through which the laser light is intended to enter or exit the gain element, and

an optical coating applied to said smooth surfaces wherein said smooth surfaces serve to substantially reflect pump light that is introduced into said laser gain element and so keep the pump light confined within said laser gain element,

said applied optical coating designed to preferentially transmit amplified spontaneous emission and parasitic light out of said laser gain element and into said optical coating, said applied optical coating having an outer surface and

said outer surface of said optical coating designed to substantially scatter or absorb amplified spontaneous emission and parasitic light that reaches said outer surface so as to prevent it from re-entering said laser gain element.

7. (Previously Amended) A method of producing a laser gain element for amplifying laser light, comprising:

providing said laser gain element with enter or exit surfaces through which the laser light is intended to enter or exit the gain element,

providing said laser gain element with smooth surfaces other than those enter or exit surfaces through which the laser light is intended to enter or exit the gain element,

coating said smooth surfaces with an optical coating so that said smooth surfaces which are in contact with said applied optical coating serve to substantially reflect pump light that is introduced into the gain element and so keep pump light confined within the gain element and wherein said applied optical coating is designed to preferentially transmit amplified spontaneous emission and parasitic light out of the gain element and into said applied coating and the outer surface of said applied optical coating substantially scatters or absorbs said amplified spontaneous emission and parasitic light that reaches said outer surface of said applied optical coating so as to

prevent said amplified spontaneous emission and parasitic light from re-entering the laser gain medium.

8. (Previously Amended) The laser method of claim 7, wherein said applied optical coating is a diffuse reflectance material such as powdered BaSO₄, an absorbing film such as Ge, or a roughened surface to reduce the specular reflectivity.